



May 21, 2001

**DESIGN MEMORANDUM No. 01-03**  
**TECHNICAL ADVISORY**

**TO:** All Design, Operations, District Personnel, and Consultants

**FROM:** /s/ Anthony L. Uremovich  
Anthony L. Uremovich  
Acting Design Policy Engineer  
Contracts and Construction Division

**SUBJECT:** Use of English Units in Plan Development

**EFFECTIVE:** October 16, 2001, Letting

On March 5, 2001, the Commissioner issued a memorandum to the Executive Staff, Division Chiefs, and District Directors, regarding the use of english units. The memorandum stated that the Department will use english units as the primary measurement system, and metric units as the secondary measurement system, for all policies and contract documents.

Until we incorporate english units into the Design Manual, the attached information should be used as a guide for developing plans with english units.

New surveys will be taken in english units beginning immediately. The plans developed from such surveys will, of course, be in english units. The plans developed from newly received metric surveys will still be in metric units. Project plan development which has been started in metric units will be completed in metric units. If a consultant wishes to convert newly developed metric plans to english units, it may, but at no increase in cost to the Department. The consultant should first discuss the conversion with the chief of the Design Division.

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Attachment

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LANE WIDTH	SHOULDER WIDTH	MEDIAN WIDTH
Meters Feet	Meters Feet	Meters Feet
4.8 16'-0"	2.4 8'-0"	25.0 80'-0"
4.2 14'-0"	2.3 7'-6"	18.0 60'-0"
3.9 13'-0"	2.1 7'-0"	8.0 26'-3"
3.6 12'-0"	1.8 6'-0"	7.9 26'-0"
3.3 11'-0"	1.2 4'-0"	4.8 16'-0"
3.0 10'-0"	0.9 3'-0"	1.8 6'-0"
2.7 9'-0"	0.8 2'-6"	1.2 4'-0"
	0.6 2'-0"	0.6 2'-0"

DESIGN SPEED	CROWN CROSS SLOPE	BRIDGE CLEAR ROADWAY
km/h mph	Metric English	Meters Feet
110 70	1% 1/8 in./ft	8.4 28'-0"
100 60	2% 1/4 in./ft	7.2 24'-0"
90 55	4% 1/2 in./ft	6.6 22'-0"
80 50	6% 3/4 in./ft	6.0 20'-0"
70 45		
60 40	HORIZONTAL CURVE	
50 30		
40 25	$D = \frac{100}{L} = \frac{200 \arctan(T/R)}{L}$	D and ) in degrees
30 20		T, R, and L in feet

VERTICAL CLEARANCE	STATIONING	HMA PAVEMENT
Meters Feet	Metric: 1000 m / sta shown as 1+000.000	60 kg/m <sup>2</sup> per 25 mm of thickness = 110 lb/sft per 1 in. of thickness
7.00 23'-0"	English: 100 ft / sta shown as 1+00.00	The millimetric designation in HMA pay item names should not be anglicized as it is part of the pay item identification.
5.35 17'-6"		
5.20 17'-0"		
5.05 16'-6"		
4.90 16'-0"		
4.45 14'-6"		
4.30 14'-0"		

PRESSURE, STRESS: 7 kPa = 1 psi. 7 MPa = 1 ksi.

For pipe diameter, PCCP thickness, and compacted aggregate depth: 25 mm = 1 in.  
Edge of paved shoulder to shoulder break: 0.3 m or 300 mm = 1'-0".  
Edge of required shoulder to front face of guardrail: 0.6 m or 600 mm = 2'-0".  
Curb gutter width: 610 mm = 2'-0".